

RCRARep

RCRAInfo National Implementer Training

July - August, 2000

Overview

RCRARep allows users to select RCRA Handlers based on data in any or all RCRAInfo modules, and then allows users to view or print in a single report all RCRA data for the selected Handlers. Alternatively, users can view a list of selected Handlers and 'drill-down' to their detail.

RCRARep and RCRAInfo are separate applications, but RCRARep cannot run without RCRAInfo. We're demoing today on a laptop. We hope to get RCRARep into production on the Web around Labor Day.

EPA-NE management have supported RCRA data management efforts faithfully over the years, and have done so again for RCRARep. Three RCRA Chiefs contributed contract funds to hire Booz Allen Hamilton (BAH) to write RCRARep's High Level Design, to develop Handler selection and the user interface, and to integrate BAH's software with that developed by EPA-NE. Developers in EPA-NE's IT Group found time to develop report all of RCRARep's print-lines in Oracle. We have more development to do, but RCRARep's modular design allows incremental development, and eases ongoing maintenance and enhancement.

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Secure

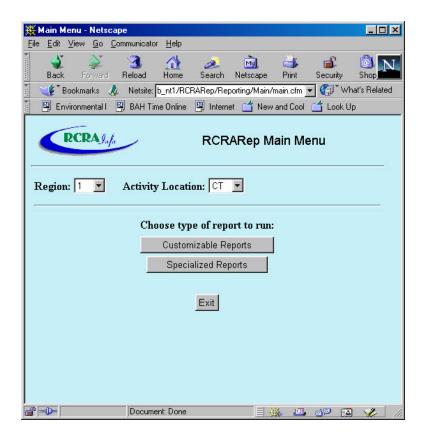
Users access RCRARep via RCRARep's URL: https://www.epa.gov/RCRARep or via a hyperlink from RCRAInfo.

Only RCRAInfo users can log on to RCRARep. When a RCRAInfo System Administrator gives a user access to RCRAInfo, the Administrator enters the user into OAURS, EPA's Oracle application tracking system. To also give a user access to RCRARep, the Administrator sets OAURs switches to say that the user can use auxiliary applications, like RCRARep.

RCRA data can only be updated within RCRAInfo, so RCRARep users can only read RCRA data, not update it. RCRARep encrypts all Web traffic with Secure Socket Layer.

RCRARep requires a user to supply his/her RCRAInfo password. As a user logs on to RCRARep, RCRARep sends a tiny retrieval to RCRAInfo to check that RCRAInfo is up and that the ID/password are good. If the retrieval runs OK, RCRARep lets the user in; if not, it gives appropriate feedback. Thereafter every retrieval for a user uses his/her ID and password without the user's having to rekey it again during a session.

Since RCRAInfo verifies a user's ID and password for every RCRARep access, RCRARep can leave password management to RCRAInfo: it is RCRAInfo that counts retries with a bad password and lock users out if they try too many times. RCRARep sends users to RCRAInfo to reset their password when it expires.



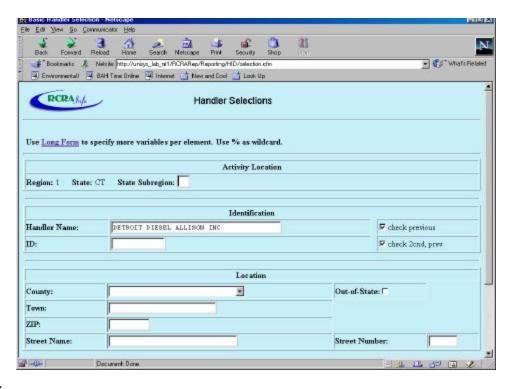
Efficient

RCRARep's modular design breaks processing into four steps: get the user's run selections, select handlers, format report lines, output the report.

Our Oracle leads say that separating selection from other processing is more efficient because it ensures that Oracle won't redo selection when reporting from many tables. They also recommend breaking up selection by module, and formatting print lines for a few tables at a time - all to avoid choking Oracle by processing too many tables at a time. The output of requested selection subprocesses are roll-up together at the end of the selection step. Similarly, desired report lines are rolled-up together at the end of the report-formatting step. Maintenance and enhancement of RCRARep will be easier because each subprocess has a well-defined start and end point, a short span of control, and a well-defined output - and because many subprocesses are similar.

The 'Customizable' selection option allows a user to choose run-specific selection criteria and also to specify the kinds of data to be viewed or printed. The 'Specialized' selection option uses predetermined selection criteria to reliably produce routine output. Right now, 'Specialized' has no processing behind it. Except for the 1st step - getting the user's run selections - both options can use the same software.

Right now, RCARep processes only one State or Region at a time to ensure that we limit the impact of RCRARep processing until we're confident what that impact is. We will remove this restriction as soon as we evaluate our efficiency, work table space, etc.



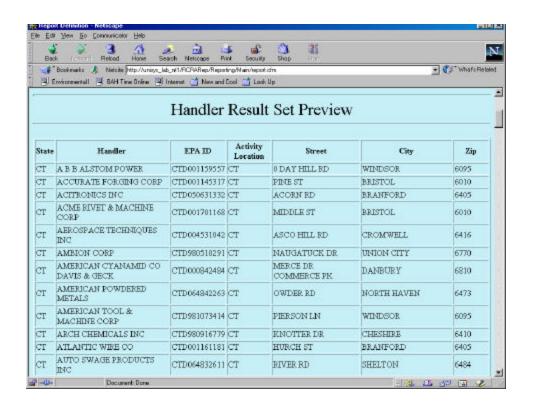
Friendly

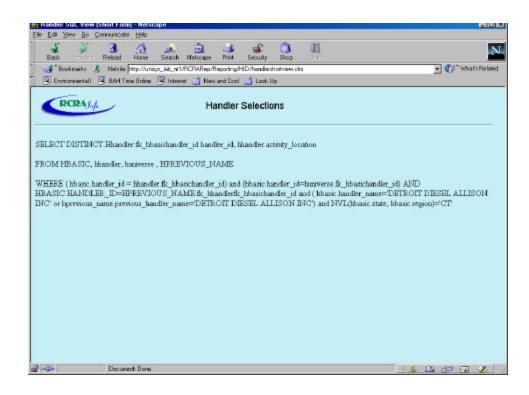
All customizable options take the user thru the same selection screens. We want users to become familiar with these screens and to master them.

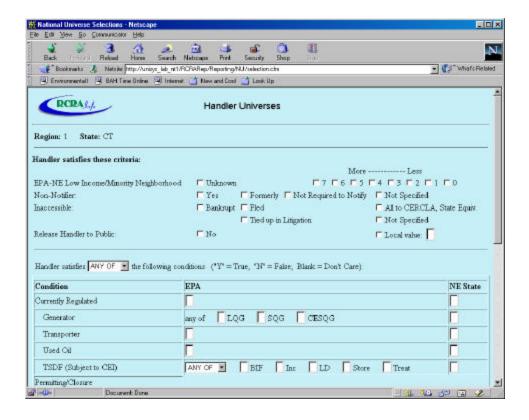
The initial selection screen is streamlined to offer only the most-used selection criteria. Most of the time, users will be able to do all their selection on this initial screen. It has the same name/ID/location options as RCRAInfo, with a few enhancements - such as selecting on other IDs, previous names, out-of-state. The long form of this initial screen allows users to specify multiple IDs, names, locations, etc. Wildcards are allowed.

Context-sensitive Help will be available by clicking on-screen labels. Also available is a Preview of Handlers selected on this screen (before they get ANDed or ORed with results from other screens), and a view of the SQL code that the screen generates (so user can analyze it, support can debug it, anyone can copy and reuse it). This information-rich user interface gives users greater control and understanding in their work. It also helps them discover their errors and their own ways to succeed.

More extensive selection is available. Buttons at the bottom of this initial screen allow users to ask to see more selection screens. Almost always users want to AND together selection results from different screens, but, occasionally, a user will want to OR screens together - which they have the option to do here.







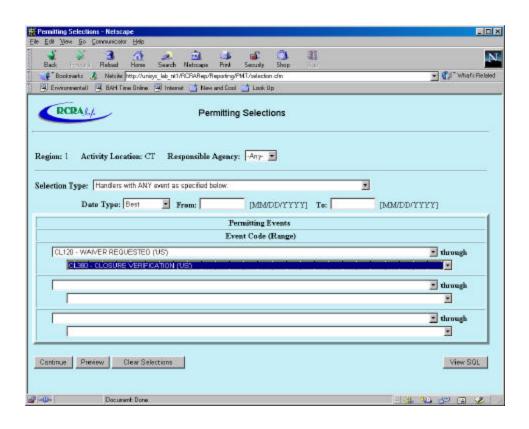
Powerful

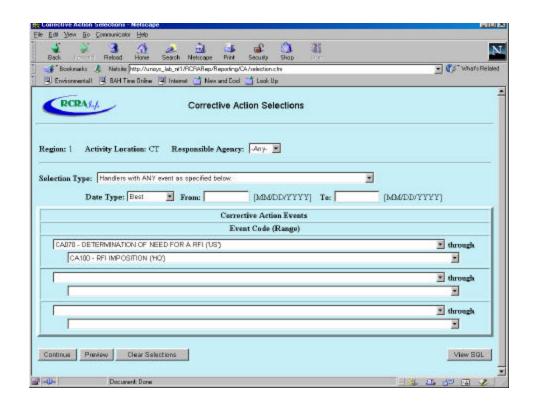
The heart of RCRARep is cross-module selection - which Booz Allen Hamilton designed and developed. EPA-NE's power users reviewed their needs under RCRAInfo and decided that their #1 need is for powerful cross-module selection like that they had in RCRARep's predecessor system.

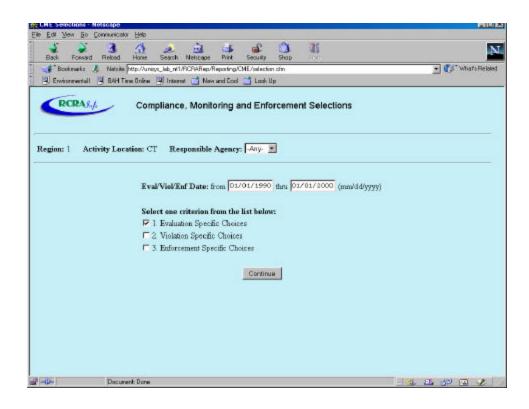
Selection is available on Handler universes, PMT events and CA events. Selection is also available on Agency- and Implementor-defined ID lists (eg, baselines for local initiatives). Selection will be available on CME evaluations, violations, and enforcement actions, and on BRS. Selection will be available on EPA-NE data (eg, EPA-NE's Environmental Justice rankings and State-only regulated activities).

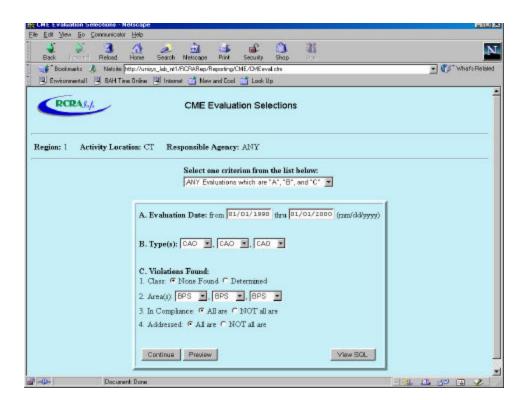
As the user 'Continues' from each screen, its selection is processed. The user can review the screen by using the Browser 'Back' and 'Forward' buttons and can change criteria and rerun selection by clicking 'Continue' again.

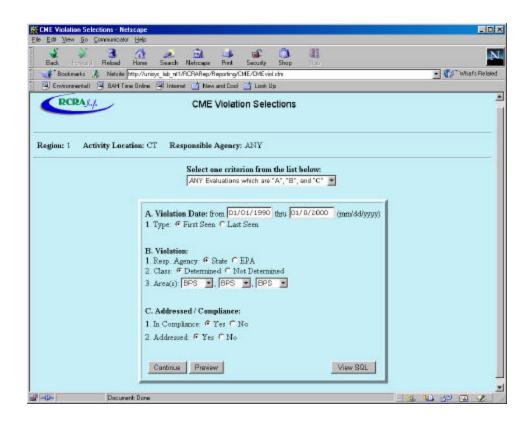
Users can create temporarily or permanently ID lists. Temporary lists last a few days. Permanent ones need a name, justification, an expiration date, and the RPOs OK. The user can reference his/her ID lists in later retrievals, or advise others to use them. Such lists can be stop-gaps when needed new selection functionality is not yet installed in RCRARep, and a specially-created ID list can serve until it is.

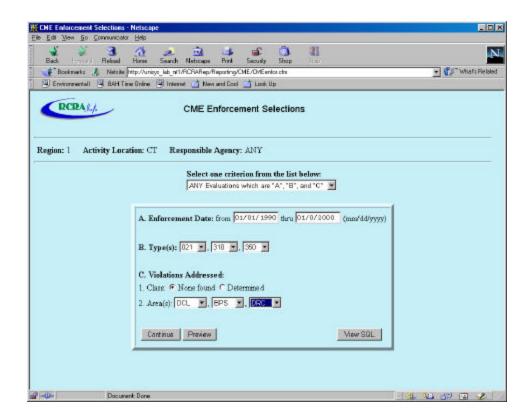


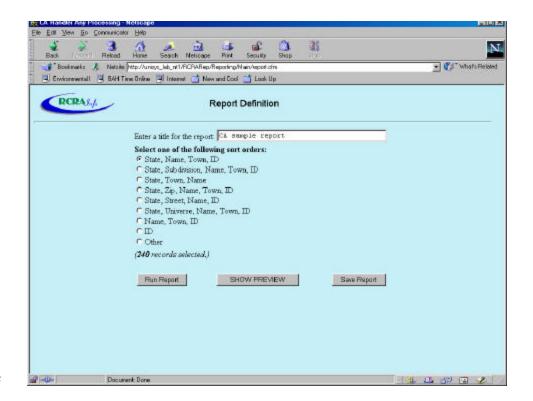












Flexible

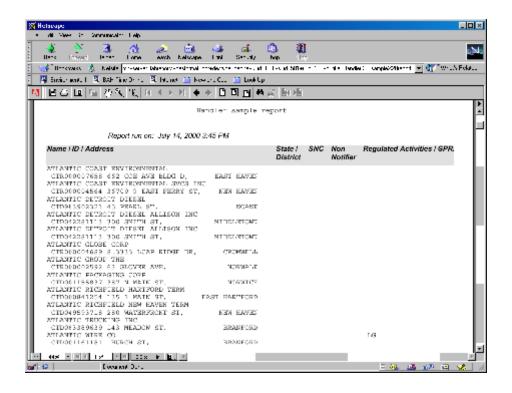
When selection is done, the selected Handlers are represented by a file of IDs, each with a qualifying activity_location. At this point we could have RCRARep run any report that accepts such a file - Ron's or Mira's, or a RCRARep one.

We plan to offer two important reporting options here. The one shown here allows the user to view the selected Handlers and then drill-down to any Handler's detail. The second option allows the user to specify kinds of information to appear on a report, then generate the report. Both options present information in the same format so that users can become familiar with that presentation. Both options rout their output to the user's Browser, where the user can choose to print it.

EPA-NE currently has the drill-down functionality in its RCRIS Info software - which becomes obsolete when RCRAInfo is deployed. There are about one hundred Regional users of RCRIS Info and about as many again in the NE states. Many of them are casual users who want their screens optimized for reading, not for data entry. We want to keep our customer base happily connected to the RCRA data, so we gave priority to developing the drill-down option.

The report-generating option is also in existing EPA-NE software, and is used for thousands of reports every year, so we will be recreating. Since both options use the same software, except in their final report roll-up step, its development is almost free.

Either option allows the user to specify a Handler sort order and a Report Title.



Modular

The contents and layout of the Handler List screen is much like that in EPA-NE's current software, except that it includes GPRA baseline universes.

As in our current RCRIS Info software, users can select a Handler and drill down to view its detail.

'Just-in-time' processing generates detail only when the user requests it.

Comprehensive

RCRARep's Permit report is much like the one in EPA-NE's current software. Our users expect PMT detail to start with a list of all PMT units and to then show all PMT events, sorted on descending date. They expect to see listed under each event the units it involved. This report will be familiar to them. The main change is that this report sorts units on unit name, rather than on legal/operating status.

These reports are comprehensive: they show all data in their module - except that, for readability, we omit minor codes and show only their decode. For example, the unit-of-measure values are a decode of a database code. RCRARep shows the unit-of-measure, but not the database code. We omit the code because showing it would make the report less readable and because users don't need it now that RCRAInfo always shows both code and decode on screen.

These reports also omit owner when its value is easily deduced. For example, if the event was done in CT by EPA, the user can deduce that the responsible person's initials are owned by EPA-NE. The RCRA database has many occurrences of Owner and we choose not to clutter the report with all of them. Where Owner isn't deducible, we show it - as for event type.

Permit Report

Report run on: July 28, 2000 1:15 PM

Report run on: July 28					
		ty Information			
Handler Name/ID/A HOLTRACHEM MFG CO		Regu	lated Act:	ivity .D	
		RINGTON			
		iveAction			
GERAL E					
Unit Name Cos #/	Treatment/Stor Unit Detail (Legal/Operati	age/Disposal/TSD U		and about	
LANDFILL DISPOSAL		ng status, Flocess and	Decail Se	q#, ecc,	
As of 11/09/85:	LIIN - Loss Of Interim St	atus - Inactive/closin	g, But Not	Yet Rora Clor	sed (HQ)
Process :	D80 0002-004 - LAND DISPO	BAL	#SubUnit	s: 1	
Capacity:	2.000 Ac-F				
As of 12/05/83:	ISIN - Interim Status - I	nactive/closing, But N	ot Yet Ror	a Closed (HQ)	
Process :	D80 0002-003 - LAND DISPO	GAL	#SubUnit	s: 1	
Capacity:	2.000 Ac-F				
As of 07/08/83:	ISIN - Interim Status - I	nactive/closing, But N	ot Yet Ror	a Closed (HQ)	
Process :	D80 0002-002 - LAND DISPO	SAL	#SubUnit	s: 1	
Capacity:	2.000 Ac-F				
As of 11/19/80:	ISOP - Interim Status - O	erating, Actively Man	aging Rcra	-regulated Was	ste (HQ)
Process :	D80 0002-001 - LAND DISPO	BAL	#SubUnit	s: 1	
Capacity:	2.000 Ac-F				
OTHER TREATMENT	(0003)				
As of 11/20/80:	NRPF - NEVER REGULATED AS	A TSD - PROTECTIVE FI	LER (HQ)		
Process :	T04 0003-002 - TREATMENT		#SubUnit	:s: 1	
Capacity:	29,006.000 Gal/D	ay			
As of 11/19/80:	ISOP - Interim Status - Op	perating, Actively Man	aging Rcra	-regulated Was	ste (HQ)
Process :	T04 0003-001 - TREATMENT		#SubUnit	s: 1	
Capacity:	29,006.000 Gal/D	ay			
STORAGE CONTAINER	(0001)				
As of 11/20/80:	NRPF - NEVER REGULATED AS	A TSD - PROTECTIVE FI	LER (HQ)		
Process :	S01 0001-002 - STORAGE		#SubUnit	s: 1	
Capacity:	5,000.000 Gal				
As of 11/19/80:	ISOP - Interim Status - Op	erating, Actively Man	aging Rcra	-regulated Was	ste (HQ)
Process :	S01 0001-001 - STORAGE		#SubUnit	s: 1	
Capacity:	5,000.000 Gal				
	Permitting/Clos	ure/Post-Closure E	vents		
Event/ Agency, Sta	aff/ Covered Units/Notes	1stSc	ched	Now Sched	Actual

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Readable

RCRARep's Corrective Action report is much like the one in EPA-NE's current software. Our users expect CA detail to start with a list of all CA Authorities sorted on descending date. Then they expect a list of all CA Areas, in alphabetic order with the 'entire facility' area first. Then they expect to see all CA events, sorted on descending date, and, under each CA event, the Authorities and Areas involved in the event.

RCRARep presentations are largely row-oriented. This has advantages. We can keep adding rows to our reports so they can hold an unlimited range of information. We couldn't keep adding columns in order to squeeze all of RCRAInfo's many kinds of data onto a report. Also, when a line has no data on it, RCRARep can omit it and squeeze more information onto a page or screen. Also, row labels are close to their data and don't scroll off the top of the screen.

RCRARep has some columns, too. The left side of the screen orients the reader to the kinds of data being shown and to major breaks in the data. The right side has dates or other important information.

When RCRARep formats print-lines separately and rolls them all up together, it must treat every line as if the whole print-line is a single field. This makes reporting efficient, but means such lines cannot use proportional fonts, columns, line wrapping, etc. An advantage of these unadorned print lines is that our reports can be made to print correctly on simple high-speed printers. NTSD staff have said that internal EPA printers, and we have designed our reports so that even a character-mode printer could output them.

CA Report

Report run on: July 28, 2000 5:42 PM

	Facility Information
Handler Name/ ID Address	Regulated Activity
HAMILTON SUNDSTRAND DIV OF U T C	LG TR LD
CTD001145341 AMILTON RD	WINDSOR LOCKS

Corrective Action Authorities					
Autority, Citation/ Responsibility/ Etc. Lead Program	Issued	Effective Revoked			
CONSENT ORDER RCRA 3008(h) or equivalent					
In CT: by EPA Lead: R1DG Atty:	05/17/94	05/17/94			
-	,,	,,			
Progm: RCRA					
CONSENT ORDER RCRA 3008(h) or equivalent					
In CT: by EPA Lead: R1RS Atty:	08/11/89	08/11/89			
Progm: RCRA					
UNILATERAL ORDER RCRA 3008(h) or equivalent					
In CT: by EPA Lead: R1RS Atty:	09/30/88	09/30/88			
Progm: RCRA					

	Co	rrective Ac	ction Areas		
Area Name, Seq#/Releases/St	aff/Notes			Entire Facility	Regulated Unit
ENTIRE FACILITY		(0001)		Yes	
Releases: Air: X	GW: X	Soil: X	Surface Water: X		
REMAINDER OF FACILITY		(0003)		No	
Releases: Air:	GW:	Soil: X	Surface Water:		
SWMU 24 - BUILDING 2 LF		(0002)		No	
Releases: Air:	GW:	Soil:	Surface Water:		

	Corrective Action Events		
Event/	esponsibility/Authority/Covered Areas/Notes 1stSched	Now Sched	Actual
CA350	AAA AMA ARRESTED (TO)		
CASSO	001 - CMS APPROVED (HQ)	12/01/00	
	In CT: by EPA RIAG	12/01/00	
a	Auth'y: Thru EPA effective 08/11/89 Consent Order		
CA200	001 - RFI APPROVED (HQ)	00.104.100	
	In CT: by EPA R1AG	08/31/00	
	Auth'y: Thru EPA effective 08/11/89 Consent Order		
CA650	008 - STABILIZATION CONSTRUCTION COMPLETED (HQ)		
	In CT: by EPA R1AG		02/10/99
	Auth'y: Thru EPA effective 08/11/89 Consent Order		
	Notes: 1,000 YD REM		
CA600SR	012 - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS	SOURCE REMOVL &/OR TRI	(HQ)
	In CT: by EPA R1AG		11/09/98
	Auth'y: Thru EPA effective 08/11/89 Consent Order		
	Auth'y: Thru EPA effective 08/11/89 Consent Order Notes: 1000 YD REMO		
CA650	•		
CA650	Notes: 1000 YD REMO		10/28/98

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Interactive

RCRARep's CME report is much like the one in EPA-NE's current software. Our users expect CME detail to show all evaluations, then all violations, then all enforcement actions, all sorted by descending date. They expect the evaluation block to show links to areas evaluated and violations found for each evaluation; and the violation block to show links to enforcement actions and scheduled RTC date for each action; and the enforcement block to show links to violations addressed by the action. We added a new flag to violation links to warn when a violation has not been addressed or has not yet Returned to Compliance.

The CME report is comprehensive, except for the exceptions noted above and for the omission of evaluation and enforcement sequence number which we deem unnecessary in identifying those events.

Because only a little information fits in a Browser window, advise users to print information they want to study -else they may assume that off-screen data is correct and complete, when it is not. Such printing is low volume compared to the large routine dumps that we continue to wean users away from.

Interactive viewing has its own benefits. For example, one can paste a key value - for example, area sequence number - onto the clipboard (CTRL+C) and then confidently locate all references on the page to that key (CTRL+F).

CM&E Report

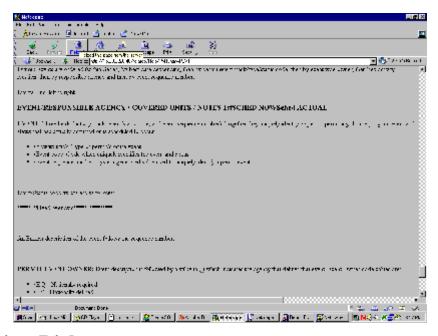
Report run on: July 28, 2000 1:41 PM

Facility Information

Facility Information					
Handler Name/ID/ Address		Regulated A	Activity		
HOLTRACHEM MFG CO LLC		LG TR	LD		
MED000242701 RIVER RD ROUTE 1	5, ORRINGTON				
GPRA: PostClosure	CorrectiveActio	on			
Evaluations					
Evaluation, Agency, Staff, Reason/E	valuated/ Note		Found Viols Date		
OTH OTHER EVALUATION 07/25/97		(HQ)	Yes		
In ME: by STATE	R1BTP A	Case Development			
OTH OTHER EVALUATION 05/14/97		(HQ)	Yes		
In ME: by STATE	R1BTP A	Case Development			
OAM OPERATION AND MAINTENANCE IN: 09/17/96	SPECTION	(HQ)	Yes		
In ME: by STATE	R1BTP				
CEI COMPLIANCE EVALUATION INSPECT		(HQ)	Yes		
In ME: by STATE	R1JG B				
CEI COMPLIANCE EVALUATION INSPECT	TION ON-SITE	(HQ)	Yes		
In ME: by STATE	R1BTP A				
CEI COMPLIANCE EVALUATION INSPECT	FION ON-SITE	(HQ)	Yes		
In ME: by STATE	R1BTP A				
CEI COMPLIANCE EVALUATION INSPECT	PION ON-SITE	(HQ)			
In ME: by STATE	R1BTP				
OAM OPERATION AND MAINTENANCE IN: 07/27/92	SPECTION	(HQ)	Yes		
In ME: by STATE	R1DR				
CAO CORRECTIVE ACTION OVERSIGHT 09/17/91		(HQ)	Yes		
In ME: by EPA	R1JKG				
CEI COMPLIANCE EVALUATION INSPECT 05/09/91		(HQ)	Yes		
In ME: by STATE	R1BT				
CAO CORRECTIVE ACTION OVERSIGHT 04/26/90		(HQ)	Yes		
In ME: by EPA	R1BC				
CAO CORRECTIVE ACTION OVERSIGHT 03/30/90		(HQ)			
In ME: by EPA	R1RMF				

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Notes: PENALTY DEMAND ISSUED



Information-Rich

Menu screens and on-screen reports have context-sensitive Help - obtained by clicking on hyperlinks in report column headings or on menu row labels.

Printed reports will offer an optional Help Appendage that describes the kinds of data shown on the report.

Help is written and maintained by EPA-NE RCRA programmatic data leads. It includes both National and Implementor codes, and can include RCRAInfo's metadata. For example, Help could tell whether a given code is in active use now, whether it is released to the public, and which Agency defined it. We hope to work with other Implementors who wish to have their own Help text in RCRARep.

User's Browser

HTML, PDF, ASCII

HTML+CFML

Oracle Reports Server

URL

IIS Web Server+Cold Fusion

SQL data

SQL data

RCRA Database

Platform

Although they are separate applications, RCRARep overlaps with RCRAInfo and cannot run without it. The overlap is in the following areas. First, RCRARep reads the RCRA database. Second, EPA-NE purchases tablespace for RCRARep within RCRAInfo in order to store intermediate files. Third, EPA-NE stores RCRARep's Oracle software objects in RCRAInfo's code library, after OSW and NTSD review those objects. Fourth, EPA-NE stores RCRARep's Oracle Report software objects on RCRAInfo's Oracle Reports Server and RCRARep uses that Server during its processing.

RCRARep has portions of its platform apart from RCRAInfo. RCRARep uses an NTSD Web Server that runs IIS and Cold Fusion. Cold Fusion provides RCRARep's friendly user interface with drop-down boxes and session variables. RCRARep's Web platform is like RCRAInfo's, but simpler. RCRAInfo uses IIS and cool:gen. RCRARep uses IIS and Cold Fusion because RCRARep is simpler and needs only ColdFusion's streamlined web functionality.

Usage charges are a hodge-podge. NTSD charges Oracle usage to the user's account, but is currently unable to break out other processing charges by user. Therefore, NTSD charges Oracle Reports usage to OSW and Cold Fusion usage to NTSD. NTSD charges disk storage, for both software and intermediate work files, to EPA-NE.

NTSD required EPA-NE to file an Application Deployment Checklist (ADC) because RCRARep uses Cold Fusion and has tablespace within RCRAInfo. We have obtained NTSD approval for some parts of our ADC and for our logical design, so NTSD allows us to use an NTSD Oracle development platform. So far, EPA-NE has done its Oracle development on an EPA-NE Oracle server with a database link to NTSD because the version of RCRAInfo on the development platform was out of date.

NTSD has no Cold Fusion development platform, so we need NTSD's approval of BAH's ColdFusion code before that code can go any NTSD platform. At that point, we expect to have a complete development platform for RCRARep at EPA. Then NTSD must still approve our ADC and our Security Plan before we can go into production. We estimate Labor Day as the earliest possible date for RCREP to go into production.

Just-in-Time Development

- In December 1999, contract dollars became available for RCRARep design and development. At the same time, OSW released the first RCRAInfo module and its converted data. So RCRARep development began just in time to see and use live RCRAInfo.
- By February 2000, our Contractor, Booz Allen Hamilton (BAH), had finished writing RCRARep's High Level Design and begun development. At the same time security concerns caused EPA to cut off outside access to EPA computing platforms. Since BAH had its own platform and would not be able to access an EPA one for the forseeable future, BAH's platform became RCARep's only complete development platform. This happened in time to spare us from investing our efforts in an EPA platform that has since proved elusive. It also focused EPA-NE efforts on writing detail design.
- In March, EPA's Central IT Group (NTSD) formalized its procedures for developing and deploying on NTSD platforms. We then began the lengthy task of writing an Application Deployment Checklist (ADC) and seeking NTSD's approval of our ADC hopefully in time to deploy RCRARep at Labor Day.
- In April, EPA-NE IT staff began developing Oracle portions of RCRARep software. At the same time, NTSD told us that we could not use any NTSD Oracle development platforms until they approved our logical design, which they did soon afterwards. In the interval before NTSD approved our logical design, we began developing on an EPA-NE Oracle Server with a database link to RCRAInfo's most complete instance (then rcra.preprod). This proved a good decision because, in May, NTSD told us that they do not offer a Cold Fusion development platform and, in June, we found that the development version of RCRARep was out of date. OSW has since updated that development instance, but our decision to work on EPA-NE servers came in time to spare us a series of disruptions.
- In May, we realized we would not have a complete development platform at EPA any time soon. So we asked BAH to develop the whole user interface and to integrate our deliverables with theirs. This change caused us to postpone some deliverables (CME selection, crossmodule printouts), but we have a better chance of delivering a solid product nearly on time. It also came in time for us to ask BAH to create a complete development environment on an EPA-NE laptop so that we finally have a complete development platform at EPA-NE which we can also use for testing and for doing demos like this.
- In July, RCRARep is coming together just as RCRAInfo goes into production. NTSD is evaluating BAH's Cold Fusion software before putting it on an NTSD staging (preproduction) platform. EPA-NE still must file an RCRARep Security Plan with NTSD and must test RCRARep on NTSD platforms. Hopefully all this will happen in time to put RCRARep into production as we train our users in it and RCRAInfo.

Incomplete, Un-Prioritized Wish List

Data Entry Turn-Around Documents (Informed Forms or IIFs)

- PMT and CA Informed Forms (IF report on which staff can write info to be keyed into RCRAInfo by a centralized data entry group);
- CME Interactive Informed Forms (IIF printable versions of CME data entry screens on which staff can key information and print screens for later data entry).

Additional Reports:

- PMT and CA Managers' 'Wallpaper'.*

Additional Extracts:

- Replicate all extracts needed by other systems (eg, state manifest systems);
- Create extract files (for use in spreadsheet analysis, hopefully replacing some dump reports).

Enhance Reports

detail;

- Additional Report Output Options:
 - show/suppress person/date of last update for each record;
 - show/suppress sensitive information;
 - show/suppress events before a user-specified date (but show all CA areas and authorities, all PMT units and detail, all non-RTC's viols, whether or not they are before the cutoff date);
 - show only 1st two lines of each event vs show all data;
 - show/suppress data for States other than State user chose.
- Additional Detail
 - show state-only universes*, why no longer regulated, all BRS
 - show EPA-NE Environmental Justice ranking.*
- Additional Selection:
 - select on nationwide data in a single run;
 - select on leg/op status, other PMT unit data and on linked events.

Additional Run Options:

- Investigate Oracle Reports run scheduler for routine jobs;
- Establish an EPA-NE capability to print, like R6's;
- Investigate States' ability to print large reports.

^{*} Will be in Phase 1 RCRARep.



End of RCRARep Presentation

RCRAInfo National Implementer Training

July - August, 2000